

Chapter 2

Other Patient Characteristics

Background

Registry Patient's History of VA Utilization

We report the number of years since a patient's first service use in the prior ten fiscal years and both the percentage of years since this initial use that included 24-hour institutional care and that included outpatient care. This provides a more comprehensive picture of the Registry population, illustrating the stability and regularity of care received over the prior ten fiscal years.

GAF

Available for the majority of Registry patients, this measure of functioning is widely used in both clinical practice and research settings. Reliance upon the GAF as the only tool to assess patients' functioning may be problematic (Roy-Byrne, Dagadakis, Unutzer, & Ries, 1996), and a recent VA study found minimal association with the amount of treatment received or clinical outcomes (Moos, Nichol, & Moos, 2002). However, numerous other studies have documented the GAF's solid reliability and usefulness as an indicator of health status and treatment outcomes. With appropriate training, GAF scores are highly correlated with both symptomology and social functioning (Startup, Jackson, & Bendix, 2002; Bates, Lyons, & Shaw, 2002). In addition, a high degree of consistency in scoring has been shown across provider licensure (e.g. psychiatrists, social worker), especially in the outpatient setting (Harel, Smith, & Rowles, 2002).

VHA Directive 97-059, Instituting Global Assessment of Function (GAF) Scores in Axis V for Mental Health Patients, set policy "that, starting in FY 1998 ... mental health clinicians are required to record at least one GAF score in Axis V reflecting the 'current level of functioning' for each veteran patient seen at any VHA mental health inpatient or outpatient setting. ... Outpatients seen in a mental health clinic or program who have not had a GAF score for 90 days will require an update.... At least one GAF score in Axis V will now be required for all patients discharged from psychiatric bed sections" (Department of Veterans Affairs, 1997). We report the average of both IP and OP GAF measures for FY02, as well as a measure of the frequency with which the GAF was administered as mandated.

Psychosis Diagnosis Grouping

As described in Appendix A, for reporting purposes we assigned patients to one of three psychosis groups (schizophrenia, bipolar disorder, and other psychoses), based on which diagnosis category appeared in the most outpatient visit days or inpatient stays in the fiscal year. When comparing all psychosis patients across VISNs, we report for each VISN the distribution of patients in each of the three psychosis groups. These indicators demonstrate substantial variation in the prevalence of psychosis types among individuals in VA treatment. It is important to note these differences when comparing VISN aggregated data for all patients with psychoses. There was substantial variation across facilities in the distribution of psychosis patients. For example, individuals in the schizophrenia group constituted between 35.1% (VISN 18) and 58.9% (VISN

3) of patients with psychoses. Factors that may explain these differences include environmental factors, non-VA health service resources, VA system attributes and provider diagnostic patterns, and regional differences in veteran care seeking behavior.

Dual Diagnosis

Complicating the severity of SMI conditions alone, the additional component of substance abuse represents one of the most significant obstacles to effective schizophrenia treatment (Dixon, 1999). This "double jeopardy" (Swofford, Scheller-Gilkey, Miller, Woolwine, & Mance, 2000) offers considerable challenges to the patient, provider and system, and has appropriately received tremendous attention in the clinical literature. Pertinent issues include the pervasiveness of alcohol and drug use among the mentally ill, correlates of higher rates, debates regarding etiology, difficulties in detection and diagnosis, the deleterious effect upon symptomology and functioning, plus treatment options and prognosis. Per the Epidemiological Catchment Area study (Regier et al., 1990), 47% of individuals with schizophrenia also have a substance abuse condition, compared with a 16% prevalence rate within the general population. However, Kessler comments that both the ECA and National Comorbidity Study probably underestimate the true prevalence of dual diagnosis, since such studies often exclude the homeless and patients too dysfunctional to complete the surveys (Kessler et al., 1996). Indeed, numerous clinical studies of SMI populations have consistently estimated the rate of comorbid substance abuse at between 50-75% (Drake & Wallach, 1989). Patient factors associated with higher rates of dual diagnosis include being male, younger, unmarried, and lower SES.

The two primary theories regarding the etiology of dual diagnosis include the "vulnerability" model, which suggests that symptomology may be either initiated or exacerbated by alcohol or illicit substances (Dixon, Haas, Weiden, Sweeney, & Frances, 1991), and the "self-medication" model, where patients use substances in order to alleviate their SMI symptoms. With the self-medication theory in growing disfavor, the current view assumes a more nuanced picture, describing a collection of psychosocial risk factors (general addictive behaviors or predilections, social isolation, lack of structured daily activities, or the influence of a deviant peer group) (Mueser, Drake, & Wallach, 1998). In addition, there is recent research indicating that substance abuse may be a primary symptom of schizophrenia due to abnormalities in the hippocampal formation and frontal cortex (Chambers, Krystal, & Self, 2001). Another study found a higher incidence of early life trauma in patients with schizophrenia and substance abuse than in those with only schizophrenia indicating a possible relationship between life experience and the onset of substance abuse (Scheller-Gilkey, Thomas, Woolwine, & Miller, 2002).

Regardless of etiology, dual diagnosis presents many challenges for the treatment of SMI. These problems begin with classification, including a lack of consistent terminology (use, abuse, dependence), difficulty in detection due to masked symptoms, and poor treatment rates once diagnosed (Milling, Faulkner, & Craig, 1994; Mueser et al., 1990; Drake et al., 1989). Dual diagnosis patients generally seek less outpatient care in general, though experience more frequent inpatient admissions and relapses (Mueser et al., 1992; Swofford et al., 2000). Treatment compliance tends to be worse, including missed appointments and non-adherence to medication regimes (Drake et al., 1989; Mueser et al., 1992; Dixon, 1999). A higher risk of suicide, violence, homelessness, medical comorbidity and mortality has also been observed (Drake et al., 1989; Dixon, 1999; Dixon et al., 1991; Brown, 1997). Yet, despite this lengthy list, some researchers observe that patients with dual diagnosis might actually have a better prognosis than SMI individuals without substance use (Dixon et al., 1991; Mueser et al., 1998).

The VHA has long been the most extensive and innovative systems in providing care for dual diagnosis (Peterson, Swindle, Moos, Finney, & Suchinsky, 1992), and continues to expand as needed to treat its veterans with comorbid conditions. Integrated care (including domiciliary and residential options, case management and ACT programs, vocational training and other psychosocial rehabilitation) has been demonstrated to be essential for effective treatment of this population (Drake, Mueser, Clark, & Wallach, 1996), and recent research has demonstrated that Clozapine might offer particular advantages in the treatment of dual diagnosis (Drake, Xie, McHugo, & Green, 2000; Buckley, 1998).

Finally, comorbid conditions are extremely expensive: Dixon cites Barbara Dickey's 1996 Medicaid study of individuals with schizophrenia, where dual diagnosis patients cost an average of \$23,169 per year versus only \$12,350 in patients with no substance abuse (Dixon, 1999).

For all these reasons, it is important that VHA recognize and identify individuals with dual diagnosis as a unique sub-group and investigate the prevalence of these disorders among their patients

Mortality

SMI patients are at significantly higher risk for premature death than the overall population. Mental disorders represent a major factor in overall mortality, with nearly 8% of all deaths listing mental illnesses as a 'contributory' cause and another 2% as the 'direct' cause (Dembling, 1997). A major epidemiological study of all SMI patients served by the Massachusetts Department of Mental Health determined that, compared to the general population, SMI patients lose an average of 8.8 years of life (Dembling, Chen, & Vachon, 1999). As a population, SMI patients experience 65% higher mortality than expected for their disease and age (Baxter, 1996).

A recent article by Harris summarizes data from a variety of sources and echoes results of many earlier studies (Harris & Barraclough, 1998). The measure most often cited in the literature is the standardized mortality ratio (SMR), comparing the observed deaths to the number of expected deaths. In general for SMI patients, the authors noted SMRs ranging from 1.7 to nearly 5.0.

The causes of this increased mortality risk have been attributed to the actual disease of schizophrenia (Rosh, Sampson, & Hirsch, 2003), deficits in the quality of medical care (Druss, Bradford, Rosenheck, Radford, & Krumholz, 2001), unhealthy lifestyles (Brown, Birtwistle, Roe, & Thompson, 1999) and, of course, high rates of suicide (Osby, Correia, Brandt, Ekbohm, & Sparen, 2000).

Mortality data were collected from the BIRLS and PTF files. Both crude and age-and-gender-adjusted standardized mortality rates are presented. SMRs are reported at the national and VISN levels. SMRs were not calculated for individual stations. The calculation of SMRs beginning in FY01 uses the entire 1998 US population as the reference population. Note that prior reports, for FY99 and FY00, standardized with reference to the 1997 U.S. population. Moreover, for these years the calculation of SMRs did not adjust for gender differences and were based on an artificial population distribution, presuming a constant frequency across age groups. These misspecifications were corrected for FY01 onward. As a consequence, FY99 and FY00 SMRs from prior reports are not comparable to the SMRs reported after FY01.

VERA Patient Class

The Veterans Equitable Resource Allocation (VERA) system allocates funds to networks. Each VA patient is categorized by VERA based on their service connection, economic means and type

of medical problem. Patient eligibility categories are assigned as follows. A Category A patient is either service-connected or a non service-connected veteran who meets means test criteria. A Category C patient is a non service-connected veteran who does not fall under income limitation ceilings and receives discretionary care from the VA. Category N patients are non-veterans.

Complex care patients are designated based on a number of different criteria that can include specific diagnoses and/or a particular pattern of utilization in certain types of facilities.

Basic vested includes care that does not qualify for complex but does include the completion of at least one thorough medical evaluation or inpatient stay during the past three years.

Basic Non-Vested includes those patients who do not qualify as complex and have had neither an inpatient stay nor a medical evaluation in the prior three-year period.

All Complex patients are funded, whereas among patients receiving Basic care only Category A patients are funded.

In FY03, the case-mix adjustment methodology was expanded from a three price case-mix model to a ten price case mix model. The VERA 10 Price Groups are presented in Appendix D (new to Report this year).

Homelessness

Homelessness remains a serious and prevalent problem among veterans in general, with approximately 40% of all homeless individuals having served in the armed forces (Winkleby & Fleshin, 1993). Approximately 250,000 veterans are homeless at any given time, with perhaps twice that figure homeless at some time during the course of a year. The presence of a SMI condition greatly increases the risk of being homeless. Numerous studies report that 25-30% of homeless individuals suffer from chronic schizophrenia, and up to 50% have some mental health condition (Dickey, 2000; Koegel, Burnam, & Farr, 1988; Rosenheck, Gallup, & Frisman, 1993). While the risk may be slightly higher for patients with schizophrenia, the difference across SMI diagnoses is not significant (Herman, Susser, Jandorf, Lavelle, & Bromet, 1998). Specifically examining a veteran population, Chinman found that 39% of homeless veterans had schizophrenia (Chinman, Rosenheck, & Lam, 2000). However, other evidence indicates that substance abuse or dual diagnosis might play an equal if not more significant role (Hartz, Banys, & Hall, 1994; North, Smith, Pollio, & Spitznagel, 1996; Rosenheck & Fontana, 1994).

Although previous research has documented the prevalence of SMI conditions among the homeless (veterans and non-veterans), few studies have reported on the opposite question: *rates of homelessness among veterans with psychosis*. Olfson notes that 7.6% of patients with schizophrenia were homeless within 3 months of discharge (Olfson, Mechanic, Hansell, Boyer, & Walkup, 1999). In a longitudinal study, Kuno determined that 24% of community SMI patients were homeless for some time over a 4-year period (Kuno, Rothbard, Averyt, & Culhane, 2000). Finally, of veterans reporting to VAMC emergency departments, 29% stated they were either currently or recently homeless (Stovall, Flaherty, Bowden, & Schoeny, 1997). By providing prevalence numbers for an entire population of veterans with psychosis, this report adds to the research knowledge of this important area. We report the percent of patients with psychosis diagnoses in FY02 for whom homelessness was indicated at some point in the fiscal year.

Homelessness was identified using multiple sources from the PTF and OPC data, including:

- the variable "HOMELESS" in the OPC file
- a diagnosis of V60.0, defined as a "Lack of housing: Hobos, Transients, Social migrants, Vagabonds, Tramps" in Volume 1 of the ICD-9-CM codes
- outpatient clinic stop codes:
 - 501, "Homeless Mentally Ill, Outreach"
 - 515, "CWT/TR, Homeless Chronically Mentally Ill"
 - 528, "Phone -- Homeless Mentally Ill"
 - 529, "HCHV / Homeless Mentally Ill"
 - 590, "Community Outreach Homeless -- Staff"
- bedsection codes:
 - 28, "Homeless Chronically Mentally Ill, CWT/TR"
 - 37, "Domiciliary Care, Homeless (DHCV)"

Service Connection

Service connection is often used as an indication of illness severity as well as being a predictor of health care utilization in several VA research studies (Rosenheck & Massari, 1993). In 1999, the Veterans Millennium Health Care and Benefits Act was enacted, increasing the VHA budget for medical care by nearly \$1.3 billion. The Act includes a mandate that the VHA provide nursing home and non-institutional long-term care to veterans who are at least 70% service connected. It also authorized VHA to raise medication co-payments from \$2 to \$7 for all veterans with a service connection of less than 50%. Further, it provides, for the first time, non-institutional long-term care as part of the basic benefits package for VA enrollees.

Sen. Rockefeller (D-WV), Chairman of the Senate VA Committee, is currently investigating the VA's progress on implementing the provisions of Millennium Bill. The VA's new Undersecretary for Health, Dr. Roswell, has indicated that a final rule will be published in the Federal Register and that a plan has been submitted to Rep. Smith (R-NJ), Chairman of the House VA Committee, to fully implement the long term care program by 2004.

Given the timeliness of this issue, this year's report includes the *distribution of service connection percentages* across all SMI veterans, noting important cut-off points with regard to the Millennium Bill and other eligibility criteria.

Patient service connection was determined using the VA's PTF, OPC, and CNP Mini-master file.

Access

The VHA Mental Health Program Guidelines stipulate that "Veterans within and across VISNs should have equal access to all levels of care within the continuum" (Veterans Health Administration, 1999). Access to health care is a general concept that relates to specific dimensions of the fit between characteristics of potential clients and providers. Penchansky and Thomas (1981) summarize these dimensions in terms of geographic accessibility, affordability, availability, acceptability, and accommodation. As compared to other health care providers, the VHA has fewer affordability barriers (Penchansky & Thomas, 1981). This is particularly true among VA patients with psychoses, the majority of whom have priority status on the basis of service connection or means testing criteria. As part of a strategic transformation of service delivery, the VHA has worked to shift the locus of care from inpatient to outpatient centers. This commitment is reflected in the recent expansion of CBOCs. Assuring service accessibility is a major policy

goal in the VHA, and it is a necessary condition for the success of a strategic shift from a tertiary to a local and primary care orientation.

The negative relationship between health care utilization and distance has long been assumed, yet it has been inconsistently demonstrated in the research literature, which has largely focused on inpatient utilization. Although few patients forego care completely due to distance and transportation problems, individuals in more remote locations are more likely to delay seeking out providers (Horner et al., 1994). An early meta-analysis identified the same relationship between distance and use with mental health services as with medical services, in both private and community health systems (Shannon, Bashshur, & Lovett, 1986; White, 1986). Patients living farthest from hospitals had significantly longer lengths of stay, greater costs and worse outcomes, plus a tremendous dislocation from social support. Willingness to travel may vary by mental health diagnosis. Marcus and colleagues (Marcus, Olfson, Fortney, & Ryan, 1997) report the mean travel distance for outpatient mental health care in Pittsburgh. Mean travel distance for schizophrenia clinics was 3.6 miles, as compared to 8.5 miles for bipolar disorder clinics, and 11.7 miles for dementia clinics.

The VA has conducted numerous studies into the issue of veterans and questions of access due to distance. Zip code areas were used in studies of medical (Mooney, Zwanziger, Phibbs, & Schmitt, 2000) and mental health services (Fortney, Owen, & Clothier, 1999). Again, although not the only factor, distance was one of the primary reasons that veterans did not obtain needed care. Patients living farther away from primary mental health services were 4.8 times as likely to have acute psychiatric admissions. Follow up services was also adversely affected, as distance substantially limited after care treatment for alcohol programs (Fortney, Booth, Blow, & Bunn, 1995). Research has demonstrated that patients benefit from satellite clinics. Among active VA patients with psychoses in FY00, McCarthy found that distance is associated with lower volume and poorer continuity of care over a one-year period (McCarthy, 2002). Among users of VA care, utilization among patients living closer to VA facilities was more negatively affected than among more distant patients. In addition, patients with schizophrenia, though having more overall use, were found to be more susceptible to distance barriers than were patients with bipolar disorder or other psychoses.

For the purposes of this report, access was defined as the distance from a patient's residence to their nearest VA Medical Center (excluding contract care facilities) and to their nearest Service Center (excluding domiciliary, nursing home and contract care providers). Distances are based on straight-line estimates of the geographic placement of every zip code to the zip of the closest VA provider. These data were last updated in May 2000. Data from the VA Planning Systems Support Group (PSSG) were used to ascertain the zip codes of the VA facilities and the patient's zip codes were retrieved from the PTF and OPC files.

In addition, we assessed the percentage of patients living in a Metropolitan Statistical Area (MSA). An area qualifies for recognition as an MSA in one of two ways: the presence of a city of at least 50,000 population or an urbanized area of at least 50,000 with a total metropolitan population of at least 100,000 (75,000 in New England).

Reported are the percent of patients at each location and in each diagnosis group that were in an MSA, and the average distances to those two kinds of sites.

No data are reported on those patients (approximately 5%) whose zip codes placed them in a VISN other than the one they were assigned to for the purposes of this report.

Key Findings

- As a measure of diagnosis stability, for patients who received care in both FY01 and FY02, 94.5% of SCH had the same dx in both years, 93.7% had a BP diagnosis in both years and only 81.6% of Other Psychoses had a stable diagnosis in both years.
- 66% of FY02 NPR patients were also in the FY01 NPR.
- In FY02, over 60% of inpatient GAF scores were missing.
- Since 1999, missing GAF scores have increased in IP care and decreased in OP care.
- Missing GAF scores, stable overall from previous years, continue to vary across VISNs: Inpatient from 38.9% to 80.2%, and outpatient from 4.0% to 33.0%.
- 2.9% of patients died in FY02.
- The standardized mortality ratio was 1.61 for SCH and 1.08 for BP.
- 18.2% of patients were in the VERA complex category.
- VERA category “Chronic MH” higher for SCH than BP (16.2% vs. 7.5%).
- VERA “complex” patients varied from 11.6% to 25.8% across VISNs with the complex category of “chronic mental” varying from 5.0% to 16.4%.
- 29.8% of veterans were service connected at over 70%, with 22.9% having a 100% service connection.
- BP had higher rates of concurrent substance abuse diagnoses (31.6% vs. 23.7%).

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